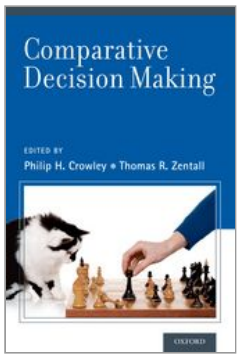

Comparative Decision Making
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Environmental Decision Making in the Argentine Delta

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Abstract and Keywords

This analysis focuses on decision making by groups of people (organizations, government) in addressing a particular political issue (failure by the government to enforce water quality regulations in the Paraná Delta of Argentina). A subjective ethnographic approach teases out the subtleties to understand the context in which legal redress is thwarted by a stew of good intentions, suspicions, poor communication, entrenched interests, and institutional dysfunction. The process that ultimately leads to a decision by a judicial arm of government does not readily fit general process models of decision making; instead it evokes a set of concepts that characterize and underscore the situation's uniqueness. The goals, methods, and interpretations in this study enrich and extend the dimensions of the comparative decision making project by incorporating a humanities perspective. In contrast with the objective behavioral approaches noted in the previous chapters, here the relation between intention and outcome plays a central role.

Keywords: groups, organizations, government, Argentina, ethnography, institutional dysfunction, intention, outcome

Kane’s analysis focuses on decision making by groups of people (organizations, government) in addressing a particular political issue (failure by the government to enforce water quality regulations in the Paraná Delta of Argentina). She uses a subjective ethnographic approach to tease out the subtleties and to understand the context in which legal redress is thwarted by a stew of good intentions, suspicions, poor communication, entrenched interests, and institutional dysfunction. The process that ultimately leads to a decision by a judicial arm of government does not readily fit general process models of decision making; instead it evokes a set of concepts that characterize and underscore the situation’s uniqueness. The goals, methods, and interpretations in this study enrich and extend the dimensions of the comparative decision-making project by incorporating a humanities perspective. In contrast with the objective behavioral approaches emphasized in most of the book’s chapters, here the relation between intention and outcome plays a central role.

1 Introduction

Decision making is a cultural process fundamental to slowing environmental destruction in all its guises. Although crucial to understanding environmental decision making, working toward a viable interdisciplinary model that could be used across problems and sites is not without obstacles. By definition, those who use general models of decision making abstract their terms from the historical particularities of place and culture. Using ethnographic methods of data collection, analysis, and writing, anthropologists focus on the ways that patterns of behavior idiosyncratically fail to fit into general models. Thus, the initial question (p.78) of collaboration across noncognate disciplines is to find key terms, and relationships between terms, that make general models susceptible to reinvestment with particularities. I suggest that we **s**hould design general models that serve as better vehicles for the density of meaning inherent in decision making, especially in a thoroughly globalized world, where the global manifests through local capabilities (Sassen, 2006) and is organized as much by differences as by similarities. Our group project can develop the field of comparative decision making by building models that extend generalizations by incorporating local difference. Moreover, to achieve practical understanding, researchers, like the people they study, must recognize that they operate within the tensions created by complexity, ambiguity, and inequality.

This chapter starts by emphasizing the conceptual distance between an anthropological approach to decision making and the model presented to contributors as an introductory point of departure (Figure 1.1, “the model”), then works toward integration. By combining the model’s components with relevant concepts from cultural and geographical theory, then filtering the combination through ethnographic description and interpretation, I experiment with ways of expanding the model’s capacity for carrying cultural meaning and social interaction.

Laboratory scientists seek to exert control over the context of an experiment in order to isolate the objects or processes under scrutiny, while ethnographers (even in their “natural laboratories”) seek to understand the interplay of context and objects or processes. This brings me to what I see as my responsibility to the group, which is to translate the terms and diagrams through which we engage to reveal the workings of social and cultural contexts. Whether these contexts are implied but unanalyzed, excluded, or ignored, they persist as effects, remnants, anomalies, or as that most dismissively annoying of terms, anecdotes.

Participant observation is the basic method of ethnographic research: the ethnographer, situated in distinct locales, identifies and interacts with key informal and formal collectivities and documents aspects of everyday life (and unexpected disruptions) with texts as well as visual and acoustic images. In urban anthropology, participant observation requires a scaling-down of intra- and inter-city comparisons such that the ethnographer can engage with everyday spheres of social collectives. Otherwise, it would be difficult if not impossible to proceed with systematic data collection, or for that matter, to take advantage of such systematic knowledge to gain insights from spontaneous events. Hence, ethnographers tend to work mostly within communities chosen because something about their character relates to the nature of the perceived problem. In my work, the communities or work environments that serve as a context for participant observation are organized around waterscapes so as to reveal better view human-water relationships.

Ethnographers select, combine, and transform participant observation data through analysis and writing. Subjects and scenes can be pulled out of larger (p.79) ethnographic works (monographs) in order to explore an area of inquiry more deeply or widely. Here, I select a set of decision-making scenes from a two-city, two-nation comparative ethnographic study of water, culture, and ecology along the South Atlantic coast of Brazil and Argentina in 2006 and 2007 (Kane, in press). Using mixed methods (participant observation, informal and semistructured interviews, still and video photography and mapping), the larger project documents and analyzes events, knowledge, and images across scales, tracing connections between the global shipping lanes plied by container ships to neighborhood waterscapes, where spaces of social interaction afford local perspectives. Ethnographic focus on two or three waterscapes per city reveal global processes of different intensities and kinds. In short, my logistical framework facilitates discovery and documentation of epistemologies by comparing cities that share ecological-industrial form and function—those where settlement and shipping rely on freshwater rivers opening onto seas. Like other multisited ethnographies dealing with contemporary environmental issues (e.g., Fortun, 2001; Kirsch, 2006; Marcus, 1995; Tsing, 2005) the resulting research design stretches ethnography to the limit in order to make sense of the intermediate scales between local and global (regional, continental, coastal). In contrast to most classical ethnography, I do not focus on *a* culture, ethnicity, race, or orientation of any kind; rather, I attempt to reveal how each city's character emerges in relation to its aquatic habitats. By means of such urban

coastal contrasts, I show the force of culture shaping the human-water relationship.

After this introduction, I discuss the implications of terms that are not explicitly included in Figure 1.1 but which, from an anthropological perspective, should inform application of the model to social reality. These implications include: context; scale; language and metaphor; performance; temporality; and networks, meshworks, and power. They are tools of cultural analysis that can serve as hinges for unfolding the conceptual spaces between and within a model's boxes and arrows. The concepts may aid the development of more flexible models or guide the application of already accepted models. Section 3 presents a note on ethnographic methods for comparing decision making in the industrialized aquatic ecologies of port cities. In section 4, I organize narrative description/analysis of decision-making scenes in the city and province of Buenos Aires in tandem with the model's category sequence: (1) condition, (2) activation, (3) options, (4) utilities, (5) decision, (6) feedback generator, (7) currency, (8) external inputs. I use the model's categories as triggers for sequencing scenes pulled from the larger ethnography. Each scene manifests one or two of the model's categories, unpacking the categories by articulating how the referenced social interactions embed implicit meanings. Thus conditions, feelings, processes, relationships, and anxieties that shape decision making but that are not expressed can be unearthed through observation, analysis, and writing. The goal of this textual experiment is to show how basic concepts from the general model and from ethnographic theory operate simultaneously to shape environmental (p.80) decision making in social reality and potentially in scholarship. Finally, I reframe the textual experiment in light of other contributions to this book. This anthropologist's chapter, like others in the book, highlights the challenges faced by those seeking to apply current formal models of decision making to real-world situations. It may also provide a language for linking formal models and practical applications.

2 Key Concepts: Articulating The Implicit

Context

The concept of context, and the social phenomena it represents, is key to the exchanges anthropologists have with other disciplines. In my experience, by studying context, ethnographers fill in the empty analytical categories with social meaning. So, for example, a group of water activists tries to reach a decision about how to pressure the government to follow the law. In order to understand their decision-making process one has to learn about the specific conditions that led up to the moment of decision. “Conditions” is a category in our model, empty until we specify them. We can stop at proximate conditions (toxic water, dying fish) or we can ask questions about the larger history that led to those conditions (a rich family donates a canal to the National Rowing Team that was later badly reengineered for flood control). Useful, too, would be to understand the state-of-being of those involved and how their impulse to act brought them together in a decision-making group. All of these contextual aspects of the observed decision-making moment feed into “structures of feeling,” defined by Raymond Williams (1977, p. 132) as the emergent aspect of human experience, the give and take of negotiating meaning in everyday life (not feelings *against* thought but thought as felt and feeling as thought). By characterizing context, anthropologists not only show the cross-cultural determinants of decision making, but we fill empty categories of analysis with text-based meaning, making the implicit explicit and showing the emergent in the given.

As I study the diagram of causal links and information flows representing the object of study here—that is, the process that results in a selection among alternatives that we are calling decision making—I am not surprised that context is not explicit. Nevertheless, context is implicit in the model’s categories (“utilities,” “external inputs”) and in the causal links or information flows (between “condition” and “activation”). Context is also in the white space within and beyond the rectangular frame of the diagram, where space can be characterized as social, geographic, or discursive. Indeed, what anthropologists often search for is exactly that which is beyond the (metaphoric) frame, beyond, in Bourdieu’s terms (1985, p. 168), the universe of discourse (or argument) where orthodox and heterodox opinions reside. Anthropologists, as often as not, seek to discover, (p.81) either empirically or interpretively, the universe of the undiscussed and undisputed and often influential because assumed. The implications for our enterprise here, then, is to realize that our exchange may provoke a *discovery* of the taken-for-granted. For example, what types of human

agency (of willful, instrumental action) and the frictions between them disappear when we use the term “information flow”?

In her analysis of anthropological reliance on and critique of formal comparative methods, Marit Melhuus (2002, p. 80) finds that strong resistance from many in the discipline is based in part on the recognized inadequacy of the scientific (or positivistic) approaches to *social* facts. Resistance to the models and hypotheses of the scientific method draws from the difficulty of reducing “meaning complexes” to testable, unambiguous, analytical terms. In other words, the very requirements for testing scientific truth exclude the search for a socially relevant, contextual truth. It is hard to bridge these tests of legitimacy across fields. So, for instance, the term “context” might be drafted into a comparative analysis but, Melhuus asks, what is it that actually makes a context? What is it about the context in a concrete case that renders something meaningful and significant for both actors and analysts? Conditions, external inputs, and utilities can always be part of the answer to her question, just as the categories and arrows of our general model can be a point of departure for interdisciplinary unfolding. In any case, the concept of context is best considered as an umbrella that subsumes the other terms in this articulation of the implicit.

Scale

One cannot analyze or generalize any complex decision-making process without engaging in some kind of scaling activity. Basic decision-making takes place in space and time. When applied, models must be situated in space, time, and jurisdiction. Yet scale is often approached as a given, not as a question or an analytic category. The decision-making diagram (Figure 1.1) omits scale. Critical geographers, however, have politicized the concept of scale, approaching it as an empirical aspect of social and geographical reality that, while apparently self-evident, is actually an aspect of social struggle that is subject to negotiation. For example, when the Supreme Court of Argentina rejects activist arguments that environmental destruction of the delta separating Argentina from Uruguay is a federal as well as a provincial matter, they exert power by means of the scalar language of jurisdiction (see more below).

To emphasize the importance of social relationships in space, Howitt (1998, 2003, pp. 144–146) characterizes scale as having at least three dimensions—*size*, *level*, and *relation*. In their study of rescaling European Union resource governance, Thiel and Egerton (2011, p. 2) elaborate on Howitt's scalar dimensions suggesting that *size* implies a horizontal element (e.g., the area of institutional (p.82) structure or physical infrastructure); *level* implies a vertical element (e.g., nested rules or jurisdictions of institutional or physical infrastructure); and *relation* involves linkages between horizontal and vertical elements and the environment. Enhancing the relational dimension of scale in our expanded decision-making model should allow us to capture contested and emergent aspects of scale. Such analyses could be used to help social movements strategize.

Language and Metaphor

Humans rely on metaphor to interpret, communicate, and differentiate among alternatives in the process of decision-making. Anchoring, erasure, and elaboration are three semiotic processes involving metaphors. Metaphoric language can be used by a speaker to take a position or to fix the listeners' attention—to anchor speech—so as to emphasize certain differences (Gal, 2005, pp. 24–25). People use spatial metaphors in order to negotiate scale in decision making: words like "spheres," "realms," "places," "levels," "habitats," and "jurisdictions" help shape decisions. But sometimes such decisions are not really about space per se. Irvine and Gal (2000) find that "distinctions between spaces are often projected onto categories of people and distinctions between people onto spaces, as a vital part of differentiation." Gal (2005) argues that sometimes space is to be taken as the "literal," "real," and "stable locus" of distinctions, whereas at other times space might be a metaphor for a group, activities, bodies, or interactions. For example, when the neighborhood activists came together in central Buenos Aires to meet in the well-appointed offices of the government lawyers, the lawyers speak as though "we" (the activist and lawyers) are unified in "our" efforts to get the courts to force the government to curb the malevolent forces of pollution in "our" city and province. But the activists, who have suffered greatly and worked hard, know that pollution's harmful effects are not evenly distributed. They, like analysts, cannot afford to assume the literal or ignore the use of deceit or dissemblance implicit in language usage.

In semiotics (the science of communication via signs, symbols, and messages), erasure is another process relevant to decision making. "In general," writes Gal (2005, p. 27), "erasures are forms of forgetting, denying, ignoring or forcibly eliminating those distinctions or social facts that fail to fit the picture of the world presented by an ideology." Because "one level of distinction can be foregrounded at the expense of another" it is crucial to analyze the ways that decisions are strategic representations—not unmediated translations—of truth and experience. Otherwise, analysts lose the chance to discover the varying ways that people in various positions organize truth and experience. Gal (2005, p. 32) finds a third semiotic process, also relevant to decision making: metaphorical *elaboration* can be put in play such that "any imagined assembly of 'us' can be divided further into an 'us' and a 'them.' The same is true for any group of 'them.'" Outside strictly hierarchical settings, figuring out who actually makes (p.83) consequential decisions or sets the terms for decision making may require interpretative work. In the case of the activists and lawyers, differences

of class, experience, and power disrupt the space-based metaphorical unity proposed by the lawyers, and a decision is taken to forestall cooperation (see more below).

Negotiating the boundaries between “us” and “them” is elementary politics that happens in and through language. It is an important aspect of decision making absent from Figure 1.1. Moreover, an expanded general model must have an analytic mechanism, such as language and metaphor, for grappling with the roles of dishonesty, indecision, and irrationality.

Performance

Decision making can have a performative dimension. Announcing a decision can be a “speech act” just like saying “I do” at a wedding (Austin, 1962). On the one hand, performances can be embodied and reproduced through everyday practice, as in the way we perform feminine, masculine, and trans-genders through talk, dress, and gesture (cf. Butler, 1990). On the other hand, performance can be an event totally intended to bring attention to our power to decide how we choose to represent ourselves (e.g., the cross-gender enactments in gay balls). Building on Diana Taylor’s (2003, p. 3) work, we can treat decision making as a performance event, wherein the decision-making process or act constitutes a methodological lens through which we can analyze ways of knowing and acting. We can frame the dynamics of decision making within an expanded model so that we can analyze the ways in which the enactment of gender affects an environmental decision-making process; or we can open the frame to allow for traveling encounters and influences, such as making decision in foreign countries with strangers operating under different assumptions about gender. In contrast, some decision-making performances may be designed not to accomplish specific tasks but to hold institutions steady despite changing externalities. In her study of institutional memory, Carlotte Linde (2009, p. 9) ponders the question of social reproduction in an insurance company: “how do social and cultural structures, practices, habits of mind and heart, remain stable over time?….[W]hat work is constantly and invisibly performed, for these structures to continue and be understood as being ‘the same’? Continuity is thus seen as an accomplishment, rather than a given.” Surely, some aspects of decision making perform the function of social reproduction, in a kind of internal mimesis, ritually seeking to perpetuate organizational identity in changing circumstances.

Performance thus folds into the process of decision making itself and into the social reproduction of institutions more generally. For example, neighborhood water activists meet bimonthly at the quayside, where they make decisions about how to engage various levels of government. At the same time, they bring props that cue passersby that the quayside meeting is a performance of participatory democracy in which they are invited to engage. Analyzing performance is a way (p.84) to understand the activation of links between formal institutional decision making and informal or grassroots decision making.

Temporality

Mostly, we rely on the scalar aspect of time, its *extent*, to organize data and understanding. In their study of scale and the human dimensions of global change, Gibson, Ostrom, and Ahn (2000) explain: “Extent refers to the magnitude of a dimension used in measuring a phenomenon. In regard to time, extent may involve a day, a week, a year, a decade, a century, a millennium, or many millennia.” However, the assumption that complex environmental questions can be ordered and apprehended by comparing chronological time at various scales may obfuscate as much as it reveals. The regular pace of laboratory temporality, that is, clock time, operates differently from the temporal frameworks influencing the reproductive decisions of fish swimming in toxic waters, or the rhythms of tidal surges and hurricanes. Modern humans can measure all phenomena against the tick tock of coordinated clocks and privilege the objective understandings gained thereby. It may even come to seem as if the tick tock is external to rather than constructed by human agency.

In her pathbreaking book *Timescapes of Modernity*, Barbara Adam (1998) analyzes the emergence of mad cow disease in Britain, arguing that the tendency to assume that a unified scale of time governs decision-making processes erases other relevant temporal processes, or *timescapes*. The “habits of mind” (p. 59) that give precedence to visuality and spatiality, rather than temporality, in studies of environmental catastrophes render some consequences of human decision-making processes invisible and undermine our understanding of how scientists configure objectivity (pp. 24–25). We can attempt to create a general decision-making model that allows for a more reflexive understanding of how humans construct the temporality by which they measure and coordinate their relationships to each other and to the world.

Memory brings in yet another layer of complexity to temporality. In her book *State Repression and the Labors of Memory*, Elizabeth Jelin (2003, pp. 3–4) develops an analytic framework that “locates the meanings of the past unequivocally in the present and in relation to a desired future.” When she adds the existence of multiple subjectivities and variable “horizons of expectations” to the framework, she finds the equivalent and divisible character of chronological or linear time insufficient to meet the analytic demands of how humans locate the “space of experience” in the present. By eliminating multiple subjectivities from objective analyses, we lose the chance to understand that—through the very process of decision making—humans construct and impose objective criteria, like clock time, only to act as if those criteria come from somewhere outside themselves. Lack of consciousness about these existential questions makes sense for us as

we go along in our everyday lives and as we experiment scientifically. But (p.85) researchers will inevitably confront problems that are best understood through analysis of multiple temporalities, repetition, and forgetting in the diverse spaces of affiliation and exclusion (see also Haraway, 1991).

Networks, Meshworks, and Power

The reliance on linear conceptions of time has led to linear conceptions of causality. This is #83a in Anne Norton's (2004, p. 1201) succinct *95 Theses on Politics, Culture, and Method*, subordinate to her Kantian #83: "time is an attribute of the observer, not the observed (cf. Kant 2007, section II, 6a and 4.1)." Actually, Norton says #83a is more a technique than a thesis: "Those relations that appear to be most asymmetrical nevertheless show mutual influence.…When one identifies a direction of influence one should always turn it around. When one identifies an influence, one should look for it to work in reverse." The technique provides a direct suggestion for revising the provisional diagram of decision-making by making it possible to reverse all arrows. It also supports her #1 thesis: "Culture is a matrix," or "network of meaning," a concept attributed most frequently to sociologist Max Weber and anthropologist Clifford Geertz. By now, the predictive usefulness of the culture as web or matrix concept has been proven by computer technology and the Internet, which has captured the "decentralized, dispersed, and transnationalized ensembles of processes that operate at many levels through multiple sites." This is where the discussion catches up with Arturo Escobar's (2008, p. 11) foundational work on social movements and the global activation of place-based knowledge. "But there are networks of all kinds," continues Escobar before asking a series of questions relevant to modeling decision-making processes:

> Is it possible to differentiate between dominant and oppositional networks, for instance? Or are they all so inextricably tied that even an analytical separation of them becomes useless? Or between local and regional and transnational networks? Or between hierarchical and centralized networks that have characterized most modern organizations, on the one hand, and the more self-organizing, decentralized, and nonhierarchical "meshworks" that characterize many contemporary movements, on the other? Or how does one reconcile being-in-place with being-in-networks? Finally, what are the implications of network thinking for social theory, including concepts of scale, space, ecosystem and the real itself? If what some theorists are arguing is correct, the network concept would be a reflection of a more

> substantial reinterpretation of how social reality comes into being…push[ing] one to think about the real in relational and contingent, not structural and law-driven, terms.

Scientists may not actually think about what they do the way Escobar or other social scientists think they do. Thinking of evolution as a "cascade of contingencies and thus fundamentally unpredictable," as behavioral scientists do (p.86) (P. H. Crowley, personal communication) does not seem overburdened by a mission to discover structure and law. I suspect that recognizing basic misunderstandings such as this one is a crucial step to productive and robust interdisciplinary exchange. But at the very least, Escobar's questions should prompt us to rethink how we model "external inputs" and "feedback generators." In a meshwork, discriminating between external and internal may or may not be useful and in any case presents challenges. Thinking of feedback, that is, how outcome alters conditions, is only feasible in strictly linear models of time. There is something important in all the decision-making categories in the diagram, but that importance needs to be reconfigured if and when ethnographic complexities are integrated.

Giddens (1979, pp. 88–89) integrates decision making in his explication of power. In *Central Problems in Social Theory*, written before the proliferation of the Internet, networks represent webs of relationships through which individuals and institutions can interact and engage in relations of power and autonomy. One strand of the theory of power (cf. Hobbes, Weber, Dahl) treats domination as a network of decision making, operating against an unexamined institutional backdrop. A critique of the "power as decision-making approach" is that actors aren't always capable of securing desired outcomes given that institutions have biases, which when mobilized, lead to a state or sphere of "non-decision-making," wherein lies implicitly accepted and undisputed practices.

Elaborating another meshwork metaphor, Foucault (1972, p. 142) points out that "relations of power are inter-woven with other kinds of relations (production, kinship, family, sexuality)." His premise that we are all both agents of and subject to power in our personal and professional lives is key to a reflexive model-building process, wherein researchers attempt a more objective representation of social reality by including themselves as participant observers within the analytic frame. While ethnographers always frame a problem or situation with a set of explicit parameters of exploration, the eventual discursive terrain the ethnography manifests or inhabits arises out of the interaction with social reality, that is, the "ground" of grounded theory. This always involves an experimental, recursive knowledge production: data

analysis and writing that combine concepts to find the most inspiring and productive fit tack back and forth between experiential fields based on systematicity and serendipity and representational fields incorporating field notes, archives, and mass media. The improvisatory character of meshworks and the circulation of power within them may well lead to the diversification of feasible alternatives (options) and values (utilities) in the implementation of an expanded general model.

3 Ethnographic Methods And The Port City Project

The research design builds comparison into logistics. I construct a broad framework by comparing infrastructure and ecology of container shipping ports. (p.87) Due to the strategic location where rivers meet the sea and their historical development as cultural, political, and economic nodes of globalization, people in port cities inhabit a uniquely complex and dynamic decision-making environment. The work presented here from Buenos Aires is part of a larger study of the industrialized aquatic ecology of three port cities along the South Atlantic Coast. Although the cities share a coast and a role in global trade, they vary by climate (temperate and tropical), by national government (Argentina and Brazil), and by language and colonial history (Spanish and Portuguese), among other differences (legal, racial dynamics, position internationally). For example, Brazil, blessed with extensive oil resources, is increasingly considered an emerging economic superpower, whereas Argentina is only slowly recovering from its millennial economic crisis. Culturally, Brazil is greatly influenced by its Afro-descendant population, whereas Argentina’s culture appears to be a more homogeneous mix of indigenous and European descendants. Of course, generalizations at the national level are hardly definitive, given the internal diversity of these neighboring countries.

I compare two or three waterscapes in each city, each selected because of its potential to illuminate dilemmas and strategic action. The unique illumination of each waterscape emerges from fieldwork; that is, I don’t attempt to wrest comparative data on the same elements or configuration of elements from each social collectivity or setting. For example, the collective political action that comes to the fore in the megacity of Buenos Aires, where water pollution is extreme, is practically absent from the much smaller Brazilian port of Salvador, where there has been more effort to improve conditions in the aquatic environment. In this sense, the work is experimental: once I set up the logistics, I reshape my ways of producing and representing knowledge: epistemology too is contextualized at different scales within networks

and meshworks. If all goes well, my ways of knowledge production will interact dynamically with those of my subjects because we are all a part of the world under examination.

In addition to accompanying those inhabitants who dedicate themselves to grappling with environmental destruction, I interview government officials, scientists, workers, and artists who relate to the waterscapes from multiple perspectives. The language and actions of these categories of people mesh in patterned ways to constitute and contextualize decision making. In general, the study of decision making in port city environments involves characterizing the parameters, contradictions, and ambiguities of waterscape-specific issues across scales, while juxtaposing and straddling popular, official, and scientific discourses and interpretive frameworks. For example, I interview engineers who occupy various positions within municipal, provincial, and federal agencies regulating and operating water resources and shipping ports. Even among engineers, decision-making responsibilities and approaches vary.

Thus the ethnographer moves recursively among fieldwork settings, in and out of analysis and writing. Knowledge builds through dialogue in a layered and (p.88) provisional series of conceptual frameworks that move toward better approximations of social reality. The resulting composite of text and image represents collective scenes of decision-making processes both empirically and interpretively. When the ethnographer takes accurate representation of multiple voices as an explicit problem, the writing itself assumes an experimental aspect. The section that follows is one such experiment in that it takes a chronological series of descriptions of decision-making scenes from fieldnotes and structures the resulting representation using the basic elements of decision making represented in Figure 1.1. The resulting narrative presents my ethnographic research results in a way that articulates and integrates concepts that are part of a shared understanding or discourse for those dedicated to the study of decision making. The aim is to suggest concepts, or axes of analysis, that can supplement the interpretations available through narrower application of the diagram’s concepts. Using the concepts presented above along with a few more introduced below can enrich the contextual grounds of interdisciplinary collaboration. Through such “thick description” of behavior and meaning we would be able to distinguish between, for example, a wink and a twitch, a signal and a neurological accident, in a hypothetical decision-making forum (Geertz, 1973).

4 Environmental Decision-Making Scenes In Buenos Aires

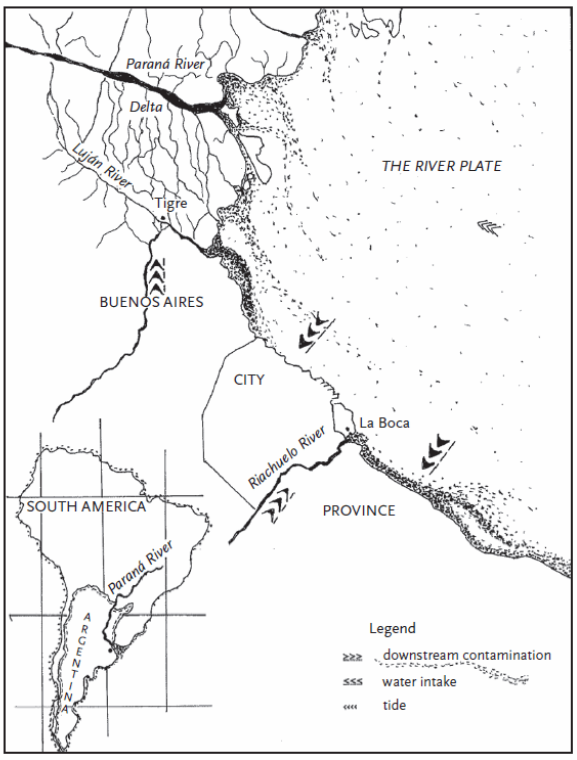
A Neighborhood Assembly Fights Against Pollution in the Delta

The decision-making scenes at issue here follow one group as it struggles to reverse one case of environmental injustice, the spread of toxic pollution by a so-called Alleviating Canal. The canal's name refers to its intended function to provide flood relief to those living or working in and near the floodplain of the Reconquista River, which circles the industry-dense and infrastructure-poor outer ring of the Buenos Aires conurbation. (Buenos Aires is the name of the city and the province. The conurbation, or suburbs of the city has expanded to the full extent of the province, which occupies two river basins: Matanza Riachuelo and Reconquista-Luján. See Map 4.1.)

Despite its name, the canal does not substantially reduce severe flooding hazard as the largest water surges come with southeasterly winds and tidal surges, up from below, not from river water flowing down. Unfortunately, the canal does, indeed, function to spread the sewage and industrial toxins upstream into the relatively pristine network of waterways and islands that compose the Paraná Delta. The Paraná Delta has the unique characteristic of flowing into a freshwater sea, the River Plate, a river shared with Uruguay. In short, the canal is both ineffective and deleterious (Defender of the People, 2007).

An established group of neighbors directly affected by the intense and intensifying pollution have come together as the Assembly of the Delta and the Plate (p.89)

River in an attempt to get at least one level of government to comply with environmental and water laws and reverse the environmental hazard caused by bungled engineering. I follow the group through a number of activist events, three of which are presented here. I also include the federal Supreme Court's response to their petition. In the narrative of events, I present ethnographic analysis in tandem with elements of our provisional diagram, its eight conceptual touchstones designating aspects of decision-making processes. As currently configured, the diagram strikes me as narrowly utilitarian in externalizing as much or more than it takes into account. Because it functions as a framework of lines and boxes that organizes our thinking, I label it "the model." While explicit flow diagrams are often used in science to propose general relationships among components of a process, this approach can be restrictive from an ethnographic perspective.



MAP 4.1:

At this point, I use the model to structure a sequence of ethnographic scenes that exemplify democratic participatory decision making. Each scene is labeled on the left by a component in Figure 1.1. I selected each scene for its potential to dramatize the component(s) in question. The narration of each scene also makes some use of implicit terms articulated in section 2. I label these, along with concepts that arose in the course of analysis, as "Supplementary Concepts." Thus each component of the model is paired with a selection of ethnographic concepts (on the right, italic). The concepts explained in section 2 are capitalized, but capitalization does not necessarily mean logical hierarchy (e.g., "TEMPORALITY and creativity" does not imply that the former subsumes the latter). The pairings of model components with ethnographic concepts show (1) how the former can be opened up to the latter in basic ways, and (2) how the text of the scene itself calls forth additional concepts. The organization attempts to lay bare the provisional quality of the dynamic and nonlinear character of the

ethnographic writing process. In this sense, the text mimics or encodes the way the ethnographer recursively tacks back and forth from data to theory and analysis. In short, ethnographic writing is quite different from a straightforward application or explanation of an inquiry or experiment that has taken place before the writing task itself.

Concepts on both sides are woven into the description-analysis of decision-making processes. The aim here is to suggest how conceptual possibilities can be expanded to thicken description and to push and pull findings and arguments in different directions. The text thus embeds clues for readers who might wish to pursue ethnographic ideas further, applying them to other topics and contexts.

Narrative Analysis of Decision Making THE MODEL *SUPPLEMENTARY CONCEPTS* CONDITION *CONTEXT*Expresses the state of the system ***history, state-of being, impulse, structure of*** *Diverse approaches to defining and characterizing systemic states that precede any decision-making process can take into account historical precedents; the diverse states-of-being of actors, groups, or institutions; or the "structures of feeling," the give-and-take of negotiating meaning in everyday life through which the process emerges as significant (cf. Williams 1977, p. 132).*

(p.90) On the outskirts of Buenos Aires…

To start, the neighborhood assembly, mostly the Tigre contingent, wants government engineers to shut off the source of the continuing pollution by rebuilding the embankment that originally separated the canal, built originally for the National Rowing Team, from the Reconquista River. The assembly considers this the logical and economical first step, given these conditions.

~~Scene 1. Bimonthly Quayside Meeting~~

2. ACTIVATION *PERFORMANCE*

Monitors condition, triggers a ***affiliation*** (Krantz et al., 2008) response

quorum (Sumpter et al., 2008)

visual cognition(Dror & Cole, 2010)

(p.91) One can conceptualize "activation" as an initiation process in a specified context. For behavioral scientists working in a lab, activation is often conceptualized as a specific behavioral trigger measured in stimulus-response scenarios. For environmental activists, however,

activation is an enduring phase that is part of nested, unfolding decision-making processes and shared personal histories. Activation is also a principle of group affiliation (hence the same linguistic root of activation/activist). Within governmental bodies, optimal responses to environmental abuses should come from within, guided by formal triggers in law or policy; but the lack of implementation and enforcement of laws and policies is exactly what is at issue. Hence the need for activists to try to change governmental response mechanisms from the outside. So, although activation is conceptualized as a distinct component in the model, activists attempting to activate government response must simultaneously work to change values (**utility** functions and **currencies**) in tandem with helping to institute more effective triggers. The temporal ordering of these activities is a tactical concern.

In the quayside scene that follows, the activists participate in their bimonthly meeting, forming a decision-making quorum (4/15/07, fieldnotes pp. 314–18). The performance is a meta-process designed to elicit the attention of passersby. The aim of such elicitation is increasing awareness of both river pollution itself and of the opportunity to join in democratic social action designed to curtail river pollution.

There has been an ongoing exploration of and dedication to identifying ways to respond, even dramatically, by blocking the bridge across the Tigre river, and by stopping traffic overflowing with vacationers who come to take pleasure in the beautiful islands and with truckers going to and from Uruguay. But that was part of the large social movement accompanying the 2001 economic crisis. When (p.92) dealing with chronic disaster, one cannot wait for perfect opportunities for dramatic performance. In 2007, in the face of continuing government intransigence, the activists' toil revolved around routine footwork: discussing and agreeing on group messages and carrying them to officials; collecting and disseminating scientific and legal information; learning, measuring, and documenting the biological cost of the canal; holding public educational events and mobilizations. That means that the activists constantly search for ways to **activate** institutions to implement and enforce already existing environmental law and policy.

They hold their bimonthly meetings on Tigre's public quay, where passersby strolling on a sunny day and enjoying family outings can see, discuss, and learn. There is simultaneously a working meeting and a performance. One of the assembly members brings me over to river's edge, along the rail where the assembly's banners are tied, and directs my gaze to the quorum of fish (cf. Sumpter et al., 2008) gulping air along the surface of the grey-green water. Due to the pollution, oxygen

deficient water makes it extremely difficult for fish to breathe. The short-term response by the fish is clearly unsustainable. From the human perspective, there is no uncertainty regarding the extent of the problem; all anybody has to do is look. The activist imparted to me through his gesture that it is up to us to reverse this dire situation. But I wonder: Who cares about dying fish?

3. **OPTIONS** ***dialogue (in context, across scales)***

Picks suitable alternatives to be evaluated

4. **UTILITIES**

Evaluates these alternatives via currency

[Note: 3 and 4 were put together so as to avoid imposing a time separation between them.]

In this continuation of the quayside scene, the activist quorum expanded to include a group of university students, some of whom are documenting the activists and some of whom are participating in the discussion. The dialogue through which individuals identify and evaluate the feasibility and desirability of alternative forms of group identity takes place in a field of partial knowledge that changes as new information is produced.

On this April afternoon, the question revolves around whether the neighborhood assembly should become a nongovernmental organization (NGO). The conflict revolves around what they see as the **option** of giving up their place-based, citizen-led egalitarian model of democratic function for a legal identity that, embodied in the form of one chosen neighbor-representative, would sit at the governmental decision-making tables. The particular **utility** of becoming (p.93) an NGO at this moment was so that the group could have a vote on the governmental River Basin Committee. It turns out that the **option** was moot; the river basin committee participants had already been designated. (The group learned this when, well into the discussion, an assembly woman read aloud from some official letters and other documents she had in her possession.)

There were some university students participating in the discussion that day, and one woman, arguing against the NGO model, expressed her passionate interest in activating democracy from below by embodying and valuing the voices of the people. Several older men and women, who made up a good proportion of the regular assembly, joined the students in expressing grave doubts about risking the

straightforward, egalitarian, authority-sharing that characterized their internal group dynamics by shifting to a representative-based model. In the end, at least for that day, the **utility** of choosing a new technically apt political form and label was acknowledged while its value was ultimately deemed equivocal. The group tabled the NGO **option**.

~~Scene 2: Stand-off with Government Lawyers~~The Public College of Lawyers for the Federal Capital(*Colegio Publico de Abogados de Capital Federal*, CPACF)5. **DECISION *METAPHOR***Selects among and implements alternatives ***affiliation cultural identity social interactional scale***"If values reside in nature we have no scientific way of knowing what they are independently of the values implicit in the metaphors deployed in mounting specific lines of scientific enquiry" (Harvey, 1996, p. 162).*In this scene, selecting and acting upon an alternative provokes some kind of transformation, at least potentially. Because unpredictability accompanies transformation, the willingness to proceed with a decision requires trust. That trust, I would argue, relies either on histories or on metaphors of affiliation and identity. In the contentious scene that follows, those who share historical affiliation and identity (the neighborhood representatives) reject the lawyers' metaphors of affiliation, curtailing any unified decision-making process.*

A meeting between representatives of neighborhood assemblies from across the vast conurbation of provincial Buenos Aires met with a group of public lawyers interested in volunteering to assist the assemblies with putting forth cases against provincial and federal governments (4/27/07, fieldnotes, pp. 335–343). (p.94) Despite good intentions on the lawyers' part and sacrificed travel and work time on the part of neighborhood representatives, the meeting would reveal a fissure between the two groups, characterized by tones of suspicion, impatience, and resistance that emerged disruptively in the small, crowded room. As a result, no **decision** could be made because the neighborhood "us" and the lawyers "them" were unlikely to ever form a quorum at that social-interactional scale. The lawyers attempted to erase differences of class, motivation, dedication, and authority to speak.

In contrast to the citizen-based authority of the representatives, the volunteer lawyers admitted that, indeed, they did not have authority to implement any decisions the group might have made without passing the whole deal up the legal hierarchy for approval. This led to recursive application of the "us" and "them" binary by some neighborhood representatives, who challenged the metaphor of unity that might have anchored joint efforts. In other words, the lawyers attempted to use

their professional, technocratic rationality tactically to achieve an affiliation, but the local activists recognized and rejected the assumptions of legal discursive practice as other.

As a consequence meeting participants were unable to **decide** on a plan of legal action. This is hardly surprising, when the complexities, direness, and geographic spread of the problems at issue are recognized. Nevertheless, the lawyers repeatedly offered to host the first “RRR encounter,” a mobilization of all the neighborhood assemblies and their allies fighting to reverse water crises all over the conurbation, but particularly outside Buenos Aires’s rich central core (where the majority of lawyers probably lived). So, although the lawyers offered technical knowledge, the activists, who had been struggling for decades without their aid, found it all but impossible to accept this belated offer of assistance. Getting pulled into the legal world could be viewed as signing over voice and control to invisible others further up the lawyers’ chain of command. Thus, in this energetic eddy of the Rule of Law, rejection of the social goal of affiliation (cf. Krantz et al., 2008) stymied the initiation of environmental decision making through the Public College of Lawyers.

“Not so,” politely says the distinguished representative from la Boca, the site of the oldest European settlement in Argentina and port neighborhood that has been the center of anarchy and socialism since the waves of 19th-century immigration from Spain and Italy, “we will decide on the mobilization site. Thank you for expressing your desire to help.” At the mouth of the Río Riachuelo, which along with the Reconquista is on the list of the world’s top ten dirtiest (Blacksmith, 2007), la Boca stretches around the toxic dead zone of a once thriving harbor. Old cargo ships list against the concrete piers beside floating garbage gathered in orange plastic rings. And yet, artists have recast this scene of devastation. The public art, whether outsider-, tourist-industry-, or government-inspired, is amazing.

6. **FEEDBACK GENERATOR *TEMPORALITY***

Alters conditions via outcome ***creativity***

Decisions transform conditions, and transformed conditions shape future decisions. In the lab, feedback generation can be narrowly defined, but ethnographic situations usually proceed otherwise. The model encourages analysis of how social processes are modified in response to the results or effects of prior decisions,

but this component could be opened up to motivate analysis of how automatic or systemic mechanisms interact with creative or idiosyncratic processes to distort or enhance the effective generation of feedback.

As the scene with the lawyers continues, I stretch the decision-making narrative to include what I observed in the harbor neighborhood of one of the speakers. By so doing, I bring reference to 19th-century immigrant activism and contemporary artistic responses to environmental degradation into the decision-making scene. The scene within a scene suggests that the collective histories of decision-makers shape the content, relevance, and temporality of feedback. While feedback can seem mechanical or routine, social change probably requires creative feedback.

(p.95) (p.96)

Figure 4.1: Rotting garbage collected in La Boca harbor.

In some sense, the onslaught of waste and apparent dereliction has so far freed the historic harbor neighborhood from neoliberal development and generated a scene of unparalleled and unexpected visual **feedback**. The contrast between postindustrial degradation and artistic intervention is surreal (Kane, 2011).

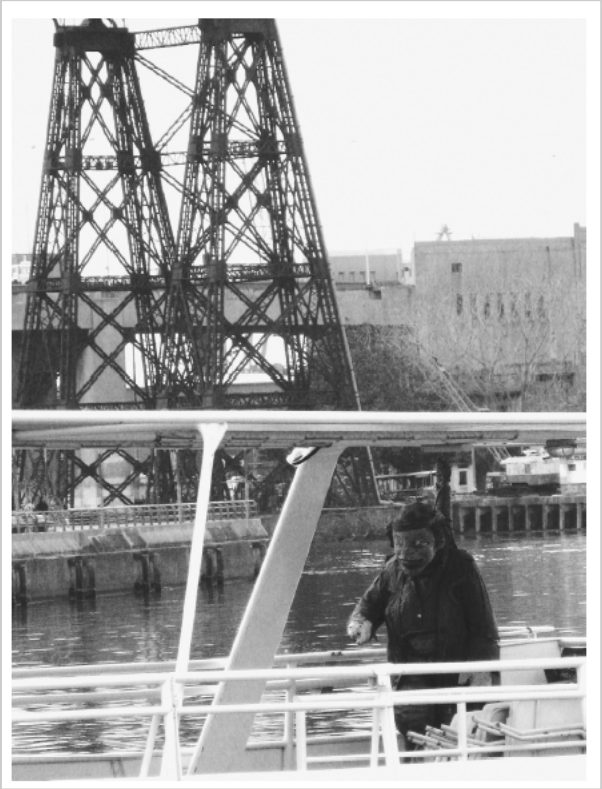


Figure 4.2: Life-size masked figure poses in front of La Boca's pendant bridge.

Back at the Lawyer's College, neighborhood activists who took a day off from work to get to the central government building, generate verbal, kinesic, and proxemic feedback in response to the contained yet arrogant helpfulness of the professionals who strolled down the hall to meet with them.

(p.97)

7. **CURRENCY** ***NETWORKS, MESHWORKS, POWER***

Establishes units for evaluating options ***collective presence***

Money is the medium of exchange in today's world. But if people persist in evaluating environmental destruction from a purely monetary standpoint, the planet is doomed. We must devise other currencies, other means of evaluating options. These will arise out of collectivities that build alterative networks or (nonhierarchical) meshworks of power and knowledge, such as the Interbasin Encounter.

~~Scene 3: Interbasin Encounter RRR~~~

(***R***iachuelo, ***R***econquista, and ***R***ío de la Plata)

> WE SAY ENOUGH OF INDIFFERENCE, OF INEFFICIENCY, OF CORRUPTION, OF IMPUNITY, ENOUGH OF CONTAMINATION!!!
>
> Banner hanging at the first RRR meeting

Representatives of all the neighborhood assemblies came together filling the great salon of the la Boca neighborhood fire station. Everyone was there: the Tigre folk, the university activists, many others I have met through my research on urban water ecology. Although no hard **currency** traded hands, there was a current running through the room that enlivened this collective performance of persistent evaluation of citizen options for achieving governmental responsibility.

The more people willingly sit together in the freezing cold to figure it out, the more decisive those who sacrifice to accomplish collective action, the more power flows to the movement organized to remediate the conurbation's polluted waters. In theory. The subtext, though, is that the industrial-ecological habitats represented and discussed by the folk in that room each need a locally specific reengineering infrastructure project. So, for example, the intricate aquatic habitats of the delta where the Tigre folk live are being destroyed by a badly conceived flood relief canal; a neighborhood on the Plate Basin is on the receiving end of a vast sewage convergence without a collection and treatment facility; another neighborhood in the conurbation is on the receiving end of constant truck traffic bringing in heaps of garbage. These examples and many others are simultaneous threats to human security in Greater Buenos Aires.

The greater solution will be heterogeneous and expensive. Yet the government is surely obligated to address these issues, if only one project at a time. Yet, against the currencies encoded in politics and law are those of pesos and dollars circulating unevenly in a global system increasingly dominated by private interests that externalize and displace the costs of environmental destruction. These private interests have not evolved to the point where they find it necessary beyond posturing to take the networks or meshworks of those who bear the brunt of, and/or fight against, water pollution into account. Ethnography, however, does take them into account by giving as much weight to their decisions as to decisions made by professionals, thus cutting through the rhetoric of irrationality, subversion, and emotionalism that the mainstream media, and increasingly the police, typically apply to activists.

(p.98)

~~Ex Post Facto [discursive legal space]~~

8. **EXTERNAL INPUTS *SCALE***

Transmit influences from outside ***fixities and flows*** (Desfor et al., 2011)

Characteristic of a criminal justice system that resists reconsideration of wrongful convictions even in the face of compelling evidence of innocence, the "push to finality" (cf. Chapter 12) can be inversely applied to the Argentinean Supreme Court decision. The Court's refusal of responsibility in the case of deltaic destruction signals to neighborhood activists that they have not yet met the necessary political threshold needed to trigger an optimal or even "good enough" (Chapter 14) response. I would argue that the decision described below is a form of preemptory foreclosure that insulates the criminal justice system from its obligation to correct prior wrongs. Like the "push to finality," preemptory foreclosure is another institutionally unjust mode of decision making. In this context, the resulting decision fixes the scales so as to perpetuate polluted flows.

Some time before the three scenes described above, the Assembly of the Delta and Plate River and the Argentine Association of Environmental Lawyers petitioned the Federal Supreme Court to intervene on behalf of the Reconquista River Basin. They argued that the delta ecology should be part of the responsibility of every level of government, that it exceeds the level of municipality and province. The nation-state should be involved in regulating all navigable rivers, and after all, the nation-state is named as responsible guardian in the treaty of the Río de la Plata and its maritime front. This was followed by a series of other arguments in favor of federal competency (See Federal Supreme Court Decision, 4/8/08, Buenos Aires. http://www.aadeaa.org.ar/descargas/recomposicion_rio_reconquista.pdf.)

Less than a year after receiving the petition, the Supreme Court handed down its decision, which was circulated to the neighborhood assembly via the Internet. The Court declared the nation-state free and clear of any legal obligation to act, thus continuing, in the words of the representative from the neighborhood assembly of Lamos de Zamora, "persistent contamination under judicial silence." Thus the Supreme Court set itself outside of the problem of hydrological chaos and short-circuited a decision-making process. Instead of providing resources and guidance through the feedback generator to concerned citizens, it used an abstract concept of jurisdictional scale to withdraw from the human-

habitat sphere. Regarding the urban aquatic environment of Buenos Aires, capital of the province and nation, the democratic government performed little better than the dictatorship (1976–1983). Perhaps, in the matter of environmental catastrophes, states weakened by financial crisis may not be much better than dictators (recall (p.99) the BP disaster in the Gulf of Mexico, summer, 2011). From the perspective of the neighborhood assembly, this **external input** from the highest court deserves vociferous **feedback**.

5 Conclusion: Postconference Reframing

Drawing on the behavioral ecology perspective presented by Andy Sih, extreme, persistent and pervasive urban water pollution can be defined as a maladaptive complex of human behavior that leads to disastrous human-induced-environmental-change (HIREC). Humans are systematically and chaotically transforming all their habitats into "ecological traps." From this perspective, port cities are "hot spots" where destruction of key estuarine animal breeding habitats increases with poverty, urbanization, and petrochemical-based industrialization. The toxicity of human presence in port cities, I would argue, is intensified by an aquatic context that is both ecologically sensitive and commercially and militarily strategic.

Ethnographic concepts and narratives from my Buenos Aires fieldwork present ways of thinking about the cultural and historical, rather than evolutionary, dimension of the maladaptive behavioral complex that is water pollution. In contrast to maladaptive neurophysiological and behavioral processes, which can seem inherent and inevitable, cultural and historical forces are subject to change. Because ethnography shows humans acting as transformative agents, it can inspire hope and creative action. And for my own work, the contributors to this book have presented a way to articulate the contribution of neurophysiology and cognition to the discussion of complex human affairs. Humans and institutions resist or refuse to make the kind of decisions and behavioral changes needed to reverse environmental destruction by working through language, culture, politics, and economics. And yet, laboratory-based research and evolutionary theory is consistent with many of the phenomena I have observed. For example, "base-rate neglect" (see Chapter 8) observed across a variety of situations and species also seems to be evident in the case of the Paraná Delta. Thus brain research can contribute to understanding why we tend to ignore chronic, general problems to focus instead on scaled-down case-specific information, or particular crises. Moreover, our brains lead us to persist in doing even useless or harmful things just because we have already invested in them ("sunk cost"). Compounding these problematic tendencies, as neuroeconomic experiments show (Chapter 6), our brain mechanisms link risk perception to ambiguity; in addition, we suffer from an aversion to ambiguity; but, of course, if we are to reverse ecological destruction, neither social movements nor criminal justice institutions can avoid grappling with ambiguity. Critical reevaluation of toxic habits that cause chronic disaster cannot succumb to base-rate neglect or continue down well-trodden paths. The field of comparative decision-making has the potential to bring these different empirical and interpretive frameworks together; it may also bring (p.100) insights

from the lab to the decision makers in the streets and on rivers while, at the same time, opening the lab to the questions posed by decision makers fighting for environmental justice.

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